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EXAMINER	
VENT, JAMIE J	

ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/832,202	KIM, CHUL-MIN	
	Examiner	Art Unit	
	Jamie Vent	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9 and 11-35* is/are rejected.

7)☒ Claim(s) *8 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claim 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable by Scott (US 4,710,922) in view of Rhoads (US 5,832,119).

[Claim 21]

In regard to claim 21, Scott discloses an apparatus, comprising:

- a microprocessor generating control signals (Figure 1 command logic 101, column 13-32);
- a first lookup table for encrypting said control signals allowing said control signals to be transmitted over a single electrical line in seriatim (Figure 6 data encoder 603, column 11, line 42-48); and

- an audio/video integrated circuit (A/V IC) chip receiving control signals in seriatim via a single electrical pin, said control signals control said A/V IC chip (Figure 1 transmission media, column 7, line 11-19. Furthermore, it is noted that one of ordinary skill in the art that the transmission received into the transceiver must enter via a single electrical pin); however fails to disclose the apparatus is a video player.

Rhoads discloses a system wherein an integrated chip is part of a video player system as seen in Figure 6 and described in Column 2 Lines 20-45. The use of a video player as the system provides the proper processing of control signals related to audio/video data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the micro processing apparatus, as disclosed by Scott, and further incorporate a system that contains a video player, as disclosed by Rhoads.

[Claim 22]

In regard to claim 22, Scott discloses a video player, said A/V IC chip comprising a second lookup table for decrypting said control signals allowing said decrypted control signals to control said A/V IC chip, said second lookup table being inverse to said first lookup table (Column 24, 14-33 describes the second lookup table for decrypting the control signals).

[Claim 23]

In regard to claim 23, Scott discloses a video player of claim 21, wherein said microprocessor outputs encrypted control signals in seriatim using a signal electrical pin, said first lookup table being stored in a memory electrically connected to said

microprocessor (Figure 1 command logic 101, transmitter 103, Figure 6, data encoder 603, column 11, line 42-48, Figure 3 SEROUT +, column 7, line 11-19).

[Claim 24]

In regard to claim 24, Scott discloses a video player, wherein said A/V IC chip comprises a shift register for converting incoming encrypted serial control signals into a plurality of parallel control signals (Figure 16 shows a shifter 1601 wherein it converts incoming encrypted serial control signals as further described in Column 25, line 67 to column 26, line 6).

[Claim 25]

In regard to claim 25, Scott discloses a video player, wherein said microprocessor outputs a plurality of control signals in parallel and unencrypted (figure 1, command signals, figure 6, command pin A, B, I, O).

[Claim 26]

In regard to claim 26, Scott discloses a video player, comprising a parallel to serial converter chip, said parallel to serial converter chip receives said unencrypted control signals in parallel from said microprocessor (figure 1, command signals, figure 6, command pin A, B, I, O) and outputs encrypted control signals in seriatim to said A/V IC chip (Figure 6, SEROUT+, column 7, line 11-19), said parallel to serial converter chip comprising said first look up table for encrypting said control signals (Figure 6, data encoder 603, column 11, line 42-48,).

[Claim 27]

In regard to claim 27, Scott discloses a video player, comprising a parallel to serial converter chip further comprises a shift register to synchronize serial encrypted control signals transmitted from said parallel to serial converter chip to a clock signal transmitted from said microprocessor (Figure 6, clock Gen 605 and shifter 606).

[Claim 28]

In regard to claim 28, Scott discloses a video player, further comprising an input panel allowing a user to input a mode of operation of said video player, said microprocessor outputs control signals based on said user's input and based on signals output from said A/V IC chip (Figure 2 CLS 211, column 29-46 and column 6, line 46-62).

[Claim 29]

In regard to claim 29, Scott discloses a video player, wherein said microprocessor outputs a chip select signal to enable said A/V IC chip and a clock signal to said A/V IC chip, said clock signal being synchronized to said in seriatim encrypted control signals (Figure 16, shows the clock Gen 1607 and enable command 1664).

[Claim 31]

In regard to claim 31, Scott discloses a method of transmitting control signals in a video player, said method comprising the steps of:

- generating first and second lookup tables for encrypting and decrypting respectively control signals used to control an audio/video integrated circuit (A/V IC) chip (Figure 6 shows data encoder 603, column11, line 42-48, and), said second lookup table being an inverse of said first lookup table (column 24, line 14-33); and
- transmitting control signals in parallel and a clock signal from a microprocessor (figure 6 parallel control data input A, B, I, O); and
- encrypting said parallel control signals via said first look up table located in a parallel to serial converter chip (Figure 6 data encoder 603 and shifter 606) disposed between said microprocessor and said A/V IC chip (Figure 1, command logic 101, column 4, line 13-32 and transmitter 103); and
- converting said parallel control signals into a serial control signal (Figure 6 shows parallel input control A, B, I, O and serial output SEROUT+, column 7, line 11-19); and

- synchronizing said serial control signal with said clock signal (Figure 6, clock Gen 605); and
- receiving said encrypted serial control signal via a first input pin on said A/V IC chip (Figure 16, SERIN+, column 25, line 8-24) and receiving said clock signal via a second input pin on said A/V IC chip (Figure 16, PPL Clock Generator 1606, column 25, line24-35); and
- converting said serial control signal into a plurality of parallel control signals via a shift register in said A/V IC chip (column25, line 66 to column 26, line 3); and
- decrypting said encrypted control signals using said second lookup table located in said A/V IC chip (column 26, line 4-6); and
- controlling a plurality of blocks within said A/V IC chip via said plurality of parallel decrypted control signals (Figure 1, command logic 105 and data sink 106).

[Claim 32]

In regard to claim 32, Scott discloses a method for transmitting control signals in a video player, wherein said parallel control signals transmitted from said microprocessor is based on a mode selection input by a user and on signals received from said A/V IC chip (Figure 2 CLS 211, column 5, 29-46, column 6, line 46-62, and column 7, line 41-62).

[Claim 33]

In regard to claim 33, Scott discloses a method of transmitting control signals in a video player, said method comprising the steps of:

- generating first and second lookup tables for encrypting and decrypting respectively control signals used to control an audio/video integrated circuit (A/V IC) chip (Figure 6 shows data encoder 603, column11, line 42-48, and), said second lookup table being an inverse of said first lookup table (column 24, line 14-33); and
- transmitting a encrypted serial control signal and a clock signal synchronized to said encrypted serial control signal from said microprocessor to said A/V IC chip over a pair of electrical connection line (column 23, line 54-59 and column17, 38-44); and
- receiving said encrypted serial control signal via a first input pin on said A/V IC chip (Figure 16, SERIN+, column 25, line 8-24) and receiving said clock signal via a second input pin on said A/V IC chip (Figure 16, PPL Clock Generator 1606, column 25, line24-35); and
- converting said serial control signal into a plurality of parallel control signals via a shift register in said A/V IC chip (column25, line 66 to column 26, line 3); and
- decrypting said encrypted control signals using said second lookup table located in said A/V IC chip (column 26, line 4-6); and

- controlling a plurality of blocks within said A/V IC chip via said plurality of parallel decrypted control signals (Figure 1, command logic 105 and data sink 106).

[Claim 34]

In regard to claim 34, Scott discloses a method of transmitting control signals, wherein said encrypted serial control signal transmitted from said microprocessor is based on a mode selection input by a user (column7, line 41-62), on signals received from said A/V IC chip information gleaned from said first lookup table (Figure 6 data encoder 603, column 11, line 42-48).

[Claim 35]

In regard to claim 35, Scott discloses a method of transmitting control signal, said first lookup table residing in a read only memory (Figure 6 data encoder 603, column 11, line 42-48) electrically connected to said microprocessor (Figure 1 command logic 101 and transmitter 103 are connected).

2. Claim 1, 14, 15, 16, 18, 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kloker et al (US 5,479,445) in view of Scott (US 4,710,922).

[Claim 1]

In regard to claim 1, Kloker et al discloses a control signal transmitting method in a video player having an integrated circuit (IC) for processing video/audio signals and a microprocessor generating control signals to control the IC (Figure 1 unmodulated serial

digital audio source 22, modulated digital audio sink 16 and transceiver 20, column 5, line 22-34), the control signal transmitting method comprising the steps of:

- mapping serial data corresponding to possible control states of the video/audio signal processing IC onto a predetermined control signal (Figure 2 unmodulated input 24, transmit serial interface 42, digital audio modulator 46 and modulated output, column 1, line 24-45, column 7, line 30-53 and column 10, 13-27); and
- reading serial data corresponding to a control state of the video/audio signal processing IC requested by the microprocessor (Figure 2, modulated input 14, digital audio demodulator 34, receive serial interface, unmodulated output 30 and receive mode control, column 9, line 9-52); and
- transmitting the serial data to the video/audio signal processing IC, being synchronized to a clock signal (figure 2, clock generation and control 40).

Kloker et al also teaches a read only memory circuit for logic circuitry (column 4 line 37-55 and column 5, line 26-33). However, Kloker et al fails to disclose a lookup table. Scott discloses lookup tables in his signal transmitting method (figure 6, data encoder 603, column 11, line 42-48, input buffer and serial input data qualifier 608, line 17-65). Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and incorporate the lookup table,

disclosed Scott, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 14]

In regard to claim 14, Kloker et al discloses the control signal transmitting method of, wherein in the transmitting process, the serial data is transmitted being synchronized to a synchronization signal during an interval where a chip select signal (CS) indicating a selection state of the video/audio IC is enabled (column 10, line 29-43); however, Kloker et al fails to disclose a lookup table for grouping the control signal. Scott discloses lookup tables in his signal transmitting method (figure 6, data encoder 603, column 11, line 42-48, input buffer and serial input data qualifier 608, line 17-65). Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and incorporate the lookup table, disclosed Scott, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 15]

In regard to claim 15, Kloker et al discloses a control signal receiving method in a video/audio processing IC, which is applied to a video player, internally has a plurality of blocks, and controls the operation of each block in response to a control signal applied from the out side (Figure 1, modulated digital audio source 12, transceiver 20, and unmodulated digital audio sink 28), the control signal receiving method comprising the steps of:

- mapping control signals corresponding to possible control states and storing the mapped control signals (column 1, line 46 to column2 line 6); and
- receiving serial data corresponding to a control state requested by the video player (Figure 2, receive mode control 13); and
- generating control signals corresponding to the received serial data referring (Figure 2, receive load control 37 and receive digital data 36).

However, Kloker et al fails to disclose a lookup table. Scott discloses lookup tables in his signal transmitting method (figure 6, data encoder 603, column 11, line 42-48, input buffer and serial input data qualifier 608, line 17-65). Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and incorporate the lookup table, disclosed Scott, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 16]

In regard to claim 16, Kloker et al discloses a control signal transmitting apparatus in a video player having an IC for processing video/audio signals and a microprocessor generating control signals to control the IC (Figure 1 unmodulated serial digital audio source 22, transceiver 20, modulated digital audio sink 16, column 5, line 22-34), the control signal transmitting apparatus comprising:

- mapped serial data corresponding to possible control states of the video/audio processing IC (column 4, line 37-55 and column1 line 23 to column 2, line 6); and
- a shift register reading serial data corresponding to the control states of the video/audio processing IC requested by the microprocessor (Figure 4 shift register 70,72, 74, 76, 78, 80, 82 and figure 6 shift register 94, 96, 98, 100, 102, 104, 106, 108, 109), and outputting the data serially being synchronized to a clock signal (Figure 2 clock generation and control 40).

However, Kloker et al fails to disclose a lookup table. Scott discloses lookup tables in his signal transmitting method (figure 6, data encoder 603, column 11, line 42-48, input buffer and serial input data qualifier 608, line 17-65). Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and incorporate the lookup table, disclosed Scott, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 18]

In regard to claim 18, Kloker et al discloses a control signal transmitting apparatus of claim 16, wherein the shift register necessarily reads serial data of the first group corresponding to the operation modes of the video player (figure 4 shift register 70, 74, and 78, figure 2 receiver and figure 7 through 14) and serial data of the other groups is selectively read according to the control state, whenever a request for transmitting a

control signal occurs (column 40, line 11-49). However, Kloker et al fails to disclose a lookup table. Scott discloses lookup tables in his signal transmitting method (figure 6, data encoder 603, column 11, line 42-48, input buffer and serial input data qualifier 608, line 17-65). Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and incorporate the lookup table, disclosed Scott, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 19]

In regard to claim 19, Kloker et al discloses a video/audio processing IC, which is applied to a video player, internally has a plurality of blocks, and controls the operation of each block in response to a control signal applied from the outside, (Figure 1, modulated digital audio source 12, transceiver 20, and unmodulated digital audio sink 28) the video/audio processing IC comprising:

- a latch for receiving serial data corresponding to a control state requested by the video player (column 9 line 9-30); and
- serial data corresponding to control signals corresponding to possible control states of the video/audio processing IC is mapped (column 1, line 23 to column 2, line 6).

However, Kloker et al fails to disclose a latch and a decoder having lookup table. Scott discloses a decoder having a lookup table (figure 16, decoder latch 1602, and decoder

1603, column 27, line 45 to column 28, line 19 and column 24, line 14-37). Thereby, the clock period can be reduced and the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the video/audio processing IC, disclosed by Kloker et al, and incorporate the lookup table and the latch, disclosed Scott, to reduce the amount of component in the circuitry and the clock period. Thereby, a fast and cost efficient system can be achieved.

[Claim 20]

In Regard to claim 20, Kloker et al discloses a video/audio processing IC, wherein the serial data is formed of a first group having necessary control states corresponding to the operation modes of the video player and the other group having control states corresponding to selective operation modes attached to the operation modes, and the decoder preferentially decodes control signals corresponding the first group (column 42 line 1-30). However, Kloker et al fails to disclose a latch and a decoder having lookup table. Scott discloses a decoder having a lookup table (figure 16, decoder latch 1602, and decoder 1603, column 27, line 45 to column 28, line 19 and column 24, line 14-37). Thereby, the clock period can be reduced and the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the video/audio processing IC, disclosed by Kloker et al, and incorporate the lookup table and the latch, disclosed Scott, to reduce the amount of component in

the circuitry and the clock period. Thereby, a fast and cost efficient system can be achieved.

3. Claim 2, 3, 4, 5, 6, 7, 9, 11, 12, 13, & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kloker et al (US 5,479,445) in view of Scott (US 4,710,922) in the further view of Takimoto (US 5,966,496).

[Claims 2, 17]

In regard to claims 2 and 17, Kloker et al discloses a control signal transmitting method, wherein mapping serial data corresponding to each of the control states (column 1 line 24 to column 2 line 5). However, Kloker fails to disclose the mapping process. Scott also discloses a control signal transmitting method. However, Scott fails to disclose the mapping process. Takimoto discloses a mapping process comprises the steps of:

- grouping possible control states into a first group having necessary control states; corresponding to the operation modes of the video player (column 15, line 29-37); and
- grouping control states corresponding to selective operation modes attached to the operation modes (column 17, line 9-64); and

Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and the signal transmitting method,

disclosed Scott, and incorporate the mapping process, disclosed by Takimoto, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 3]

In regard to claim 3, Kloker et al discloses a control signal transmitting method. However, Kloker fails to disclose the mapping process. Scott also discloses a control signal transmitting method. However, Scott fails to disclose the mapping process. Takimoto discloses a mapping process, wherein the first group comprises: Control states related to video recording/reproducing and audio recording/reproducing (column 15, line 29-37, column 16, line 52-58); thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and the signal transmitting method, disclosed Scott, and incorporate the mapping process, disclosed by Takimoto, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 4]

In regard to claim 4, Kloker et al discloses a control signal transmitting method. However, Kloker fails to disclose the mapping process. Scott also discloses a control signal transmitting method. However, Scott fails to disclose the mapping process. Takimoto discloses a mapping process, wherein the first group further comprises: Control states related to head amp recording/reproducing/recording pause (column 3, line 29- 67); thereby, the system allows communication between different components

without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and the signal transmitting method, disclosed Scott, and incorporate the mapping process, disclosed by Takimoto, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 5]

In regard to claim 5, Kloker et al discloses a control signal transmitting method. However, Kloker fails to disclose the mapping process. Scott also discloses a control signal transmitting method. However, Scott fails to disclose the mapping process. Takimoto discloses a mapping process, wherein the first group comprises: control states related to input channel selection (column 10, line 29 to column 11, line 47); Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and the signal transmitting method, disclosed Scott, and incorporate the mapping process, disclosed by Takimoto, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 6]

Claim 6 meets the limitations of claim 3, 4, and 5.

[Claim 7]

In regard to claim 7, **Kloker** et al discloses a control signal transmitting method. However, Kloker fails to disclose the mapping process. Scott also discloses a control

signal transmitting method. However, Scott fails to disclose the mapping process. Takimoto discloses a mapping process, wherein the first group comprises: Control states related to recording speed of a video/audio signal, detail amount, noise remove amount, are grouped into a second group and mapped (column 6, line 35-58, column 7, line 58-65); Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and the signal transmitting method, disclosed Scott, and incorporate the mapping process, disclosed by Takimoto, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 9]

In regard to claim 7, Kloker et al discloses a control signal transmitting method. However, Kloker fails to disclose the mapping process. Scott also discloses a control signal transmitting method. However, Scott fails to disclose the mapping process. Takimoto discloses a mapping process, wherein the first group comprises: Control states related to the mixing ration of luminance/chromaticity signal, recoding current control amount, recording equalize control amount are grouped into a third group and mapped (column 14 line 37 to column 15, line 21); Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and the signal transmitting method, disclosed Scott, and incorporate the

mapping process, disclosed by Takimoto, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 11]

In regard to claim 7, Kloker et al discloses a control signal transmitting method. However, Kloker fails to disclose the mapping process. Scott also discloses a control signal transmitting method. However, Scott fails to disclose the mapping process. Takimoto discloses a mapping process, wherein each group has at least one sub group including control state having common characteristics, and sub group are mapped corresponding to at least on bit in N bits assigned to the group the sub groups belong to (column 5, line 30-37) Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and the signal transmitting method, disclosed Scott, and incorporate the mapping process, disclosed by Takimoto, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[Claim 12]

In regard to claim 12, Kloker et al discloses a control signal transmitting method of claim wherein in the reading process, serial data of the first group corresponding to the operation modes of the video player is necessarily read and serial data of the other groups is selectively read according to the control state, whenever a request for transmitting a control signal occurs (column 5, line 8-12 and column 11, line 14-18); however, Kloker et al fails to disclose a lookup table for grouping the control signal.

Scott discloses lookup tables in his signal transmitting method (figure 6, data encoder 603, column 11, line 42-48, input buffer and serial input data qualifier 608, line 17-65). Thereby, the system allows communication between different components without adding additional logic circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use control signal transmitting method, disclosed by Kloker et al, and incorporate the lookup table, disclosed Scott, to reduce the amount of component in the circuitry to achieve a cost efficient system.

[claim 13]

In regard to claim 12, Kloker et al wherein in the transmitting process, the first group is preferentially transmitted (Figure 2 shows the transmission of data through the control 40 and furthermore described in Column 4 Lines 37-55 and Column 5 Lines 26-33).

4. Claim 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott (US 4, 710,922) in view of Rhoads (US 5,832,119) in further view of Mok (US 6,016,169).

[Claim 30]

In regard to claim 30, Scott in view of Rhoads discloses a video player. However, Scott fails to disclose the A/V IC chip comprises three electrical input pins. Mok discloses an A/V IC chip comprises three electrical input pins, one for the control signals, one for the clock signal, and the last for the chip select signal (Figure 2, ck, D and set inputs, column 3, line 51 to column 4, line 17 and column 7, line 28-44). Thereby, the amount

of pin is minimized. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use video player, disclosed by Scott in view of Rhoads, and incorporated the A/V IC chip, disclosed by Mok, to simplify the IC chip fabrication process and reduce the cost of the chip.

Allowable Subject Matter

5. Claims 8 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Kloker et al discloses a control signal transmitting method in a video player having an integrated circuit (IC) for processing video/audio signals and a microprocessor generating control signals to control the IC (Figure 1 unmodulated serial digital audio source 22, modulated digital audio sink 16 and transceiver 20, column 5, line 22-34); however, fails to disclose the lookup tables that are depicted in Claims 8 and 10.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Iwamoto (US 5,025,414);
- Imanishi (US 5,974,055).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamie Vent whose telephone number is 571-272-7384. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jamie Vent
03/29/2006